

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

DAINGEAN TECHNOLOGIES LTD.,	§	
	§	
Plaintiffs,	§	
	§	
v.	§	
	§	
AT&T CORP., AT&T MOBILITY LLC,	§	
AT&T MOBILITY II LLC, and	§	
AT&T SERVICES INC.,	§	NO. 2:23-CV-00123-JRG-RSP
	§	
Defendants,	§	
	§	
ERICSSON INC. and NOKIA OF AMERICA	§	
CORPORATION,	§	
	§	
Intervenors.	§	

**CLAIM CONSTRUCTION ORDER**

Daingean asserts Claim 12 of U.S. Patent 8,576,803 against AT&T Corp. and various of its affiliates, and T-Mobile. Ericsson Inc. and Nokia of America Corp. have intervened. For simplicity, the various defendants and intervenors will be referred to as “Defendants.”

The patent relates to “a wireless communication system in which the same frequencies are used while their mutual interferences are being avoided.” ’803 Patent at 1:12–14. The parties dispute the scope of seven terms from Claim 12. For each, Defendants challenge the term as indefinite. Having considered the parties’ briefing and arguments during a July 23, 2024 hearing, the

Court resolves the disputes as follows.<sup>1</sup>

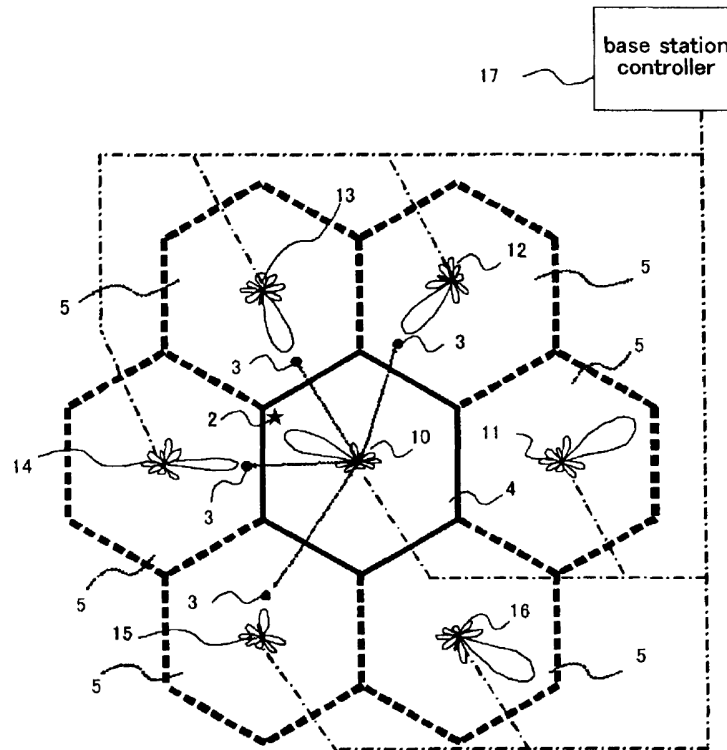
## **I. BACKGROUND**

The '803 Patent teaches a technique for improving efficiency of a single frequency band while avoiding interference from other sectors of a system using the same band. '803 Patent at 1:62–67. The technique involves having each mobile subscriber station in an area transmit a channel-estimation signal to each base station in the area and to base stations in other, contiguous areas. *Id.* at 2:9–12. “[T]he base station transmits data to the mobile subscriber station using a transmission beam that is directed to the mobile subscriber station and is not directed to the adjacent mobile subscriber stations.” *Id.* at 2:12–20. This avoids interference in the contiguous areas by allowing the mobile station to communicate with the base station corresponding to the area in which that station belongs. *Id.* at 2:24–29.

Figure 7 (below) shows a system that implements the method, with hexagonal cells corresponding to base stations 10–16. Each base station is at a cell’s center, and the cells include various mobile subscriber stations 2, 3. The figure shows each base station directing a transmission beam toward a mobile station within its cell or, alternatively, away from the stations in contiguous cells. For example, the base stations 12–14 are directing signals towards stations 3 within their respective areas, whereas the base stations 11, 16 are directing signals away from any of the stations.

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<sup>1</sup> At the hearing, the Court also heard argument in *Daingean Technologies Ltd. v. T-Mobile USA, Inc.*, No. 2:23-CV-00347-JRG-RSP. Because the cases are not consolidated, the Court will enter a separate order in that case.



**FIG. 7 of the '803 Patent**

Daingean only asserts Claim 12, which is directed to one of the base stations shown in Figure 7. The claim recites:

12. A base station for a communication system that includes a plurality of said base stations and mobile subscriber stations located respectively in areas corresponding to the plurality of said base stations, each mobile subscriber station in each area transmitting a channel estimation signal to each said base station corresponding to the area and to base stations corresponding to areas contiguous to the area, wherein:

said base station transmits data to the mobile subscriber stations using a transmission beam that is directed to the mobile subscriber stations in the corresponding area and is not directed to adjacent mobile subscriber stations in the areas contiguous to the corresponding area, the data being transmitted by the base station to the mobile subscriber stations on the basis of

the channel estimation signal received from the mobile subscriber station in an area corresponding to said base station,

the channel estimation signals received from the adjacent mobile subscriber stations in the areas contiguous to the area corresponding to said base station that are outside of the area corresponding to said base stations, and an interference amount at the adjacent mobile subscriber stations in the areas contiguous to the area corresponding to the base station.

'803 Patent at 10:7–31. The parties present seven disputes about the scope of this claim language, with Defendants challenging the claim as indefinite in each of those disputes.

## II. LEGAL STANDARDS

### A. Generally

“[T]he claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). As such, if the parties dispute the scope of the claims, the court must determine their meaning. *See, e.g., Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1317 (Fed. Cir. 2007) (Gajarsa, J., concurring in part); *see also Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996), *aff'g*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc).

Claim construction, however, “is not an obligatory exercise in redundancy.” *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). Rather, “[c]laim construction is a matter of [resolving] disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims . . . .” *Id.* A court need not “repeat or restate every claim term in order to comply with the ruling that claim construction is for the court.” *Id.*

When construing claims, “[t]here is a heavy presumption that claim terms are to be given

their ordinary and customary meaning.” *Aventis Pharm. Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013) (citing *Phillips*, 415 F.3d at 1312–13). Courts must therefore “look to the words of the claims themselves . . . to define the scope of the patented invention.” *Id.* (citations omitted). The “ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1313. This “person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.*

Intrinsic evidence is the primary resource for claim construction. *See Power-One, Inc. v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1348 (Fed. Cir. 2010) (citing *Phillips*, 415 F.3d at 1312). For certain claim terms, “the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314; *see also Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005) (“We cannot look at the ordinary meaning of the term . . . in a vacuum. Rather, we must look at the ordinary meaning in the context of the written description and the prosecution history.”). But for claim terms with less-apparent meanings, courts consider “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean . . . [including] the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Phillips*, 415 F.3d at 1314.

**B. Indefiniteness**

“[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). The claims “must be precise enough to afford clear notice of what is claimed” while recognizing that “some modicum of uncertainty” is inherent due to the limitations of language. *Id.* at 908. “Indefiniteness must be proven by clear and convincing evidence.” *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

**C. Correction of Errors**

“A district court may correct ‘obvious minor typographical and clerical errors in patents.’” *Pavo Sols. LLC v. Kingston Tech. Co.*, 35 F.4th 1367, 1373 (Fed. Cir. 2022) (quoting *Novo Indus., L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1357 (Fed. Cir. 2003)). “Correction is appropriate ‘only if (1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the claims.’” *Id.* (quoting *Novo Indus.*, 350 F.3d at 1354). “The error must be ‘evident from the face of the patent,’” *id.* (quoting *Grp. One, Ltd. v. Hallmark Cards, Inc.*, 407 F.3d 1297, 1303 (Fed. Cir. 2005)), and the determination ‘must be made from the point of view of one skilled in the art,’ *id.* (quoting *Ultimax Cement Mfg. Corp. v. CTS Cement Mfg. Corp.*, 587 F.3d 1339, 1353 (Fed. Cir. 2009)). “In deciding whether a particular correction is appropriate, the court ‘must consider how a potential correction would impact the scope of a claim and if the inventor is entitled to the resulting claim scope based on the written description of the patent.’” *Id.* (quoting *CBT Flint Partners, LLC v. Return Path, Inc.*, 654 F.3d 1353, 1359 (Fed. Cir. 2011)).

### III. THE LEVEL OF ORDINARY SKILL IN THE ART

The level of ordinary skill in the art is the skill level of a hypothetical person who is presumed to have known the relevant art at the time of the invention. *In re GPAC*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). In resolving the appropriate level of ordinary skill, courts consider the types of and solutions to problems encountered in the art, the speed of innovation, the sophistication of the technology, and the education of workers active in the field. *Id.* Importantly, “[a] person of ordinary skill in the art is also a person of ordinary creativity, not an automaton.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007).

Here, the parties present their proposed levels of ordinary skill through their experts. Daingean’s expert says a skilled artisan at the time of invention would have had “at least a bachelor’s degree in electrical engineering, computer science, or a similar degree plus at least two years of experience in wireless communications.” Feuerstein Decl., Dkt. No. 121-4 ¶ 24. Defendants’ expert adopts a similar level of skill, opining a skilled artisan “would have had a bachelor’s degree in electrical engineering, computer engineering, computer science or similar field, and two years of experience in cellular communications and/or wireless networking.” van der Weide Decl., Dkt. No. 121-6 ¶ 9. Although these proposed skill levels are similar, because Daingean’s proposal has no upper bound on the level of skill or education, the Court adopts Defendants’ characterization of a skilled artisan.

#### IV. THE DISPUTED TERMS

##### A. “the base station,” “said base station,” “said base stations”

Daingean’s Construction	Defendants’ Construction
No construction necessary; plain and ordinary meaning. Not indefinite.	Indefinite.

Defendants assert “Claim 12 is indefinite because a POSITA cannot determine [to] which base station(s) the various “base station(s)” term refer . . . .” Dkt. No. 127 at 3. They provide an annotated version of the claim:

12. A base station for a communication system that includes a plurality of said base stations and mobile subscriber stations located respectively in areas corresponding to the plurality of said base stations, each mobile subscriber station in each area transmitting a channel estimation signal to each said base station corresponding to the area and to base stations corresponding to areas contiguous to the area, wherein:

said base station transmits data to the mobile subscriber stations using a transmission beam that is directed to the mobile subscriber stations in the corresponding area and is not directed to adjacent mobile subscriber stations in the areas contiguous to the corresponding area, the data being transmitted by the base station to the mobile subscriber stations on the basis of

the channel estimation signal received from the mobile subscriber station in an area corresponding to said base station

the channel estimation signals received from the adjacent mobile subscriber stations in the areas contiguous to the area corresponding to said base station that are outside of the area corresponding to said base stations, and

an interference amount at the adjacent mobile subscriber stations in the areas contiguous to the area corresponding to the base station.

*Id.* (quoting ’803 Patent at 10:7–31). According to Defendants, a skilled artisan would not understand whether the purple-highlighted language refers to “a base station” (highlighted in cyan) or “a plurality of base stations” (highlighted in green). Dkt. No. 127 at 4. Moreover, say Defendants, it is unclear whether the purple-highlighted language refers to a completely different set of base stations. *Id.* at 5. Finally, Defendants say a skilled artisan would not be able to determine to what



the recited “base stations” in the body refers. *Id.*

Daingean counters that the meaning of these terms is reasonably certain given the context provided by the surrounding claim language. *Id.* at 4. It views Claim 12 as dividing the “communication environment” into elements in the “corresponding area” of the claimed base station and elements in the “areas contiguous to the corresponding area.” *Id.* at 6. Daingean points to Figure 7 for support, and accuses Defendants of ignoring the patent’s teachings to reach their conclusion. Dkt. No. 130 at 1–2.

The Court agrees with Daingean. The language of Claim 12 is clearly directed to a “base station” to be used in a communication system. In the context of Figure 7, Claim 12 is directed to the base station 10 of the center cell 4, and cells 5 are “contiguous.” One mobile station 2 is within the area of cell 4, while the other stations 3 are in contiguous cells 5. Thus, Claim 12 is directed to the base station 10 in a communication system that includes these elements of Figure 7. This aligns with how a skilled artisan would naturally read the claim. Each recitation of a “base station” in the body refers back to the base station to which Claim 12 is directed. Because a skilled artisan would be at least reasonably certain as to scope of the claim, the Court holds Claim 12 is not indefinite on this basis, and the Court will give these terms a “plain and ordinary meaning” construction.

**B. “the areas contiguous to the area corresponding to said base station that are outside the area corresponding to said base stations”**

Daingean’s Construction	Defendants’ Construction
“the areas contiguous to the area corresponding to said base station that are outside the area corresponding to said base station”	Indefinite.

Daingean asks the Court to correct what it calls a minor typographical error in the claim by judicially changing “said base stations” (plural) at the end of the limitation to “said base station”

(singular). Dkt. No. 121 at 9. It contends a skilled artisan “would immediately recognize this facially apparent error in light of the intrinsic record because, otherwise, the claim is impossible.” *Id.*

Defendants respond Daingean does not meet the standard for judicial correction. Dkt. No. 127 at 7. Specifically, they suggest the alleged error *is not* obvious and *is* subject to reasonable debate based on the claim language and specification. *Id.* at 11. They point to five possible understandings a skilled artisan might have from the claim language as written, including the position now advanced by Daingean. *Id.* at 12. They also assert Daingean’s proposed construction renders part of the claim superfluous. *Id.* at 14–15.

The Court against agrees with Daingean. First, “the error is clear from the full context of the claim language.” *Pavo Sols.*, 35 F.4th at 1374. The first “channel estimation signal” limitation provides antecedent basis for the last part of the disputed phrase by reciting “*an area* corresponding to said base station” (emphasis added)). ’803 Patent at 10:24–25. The second “channel estimation signal” limitation then refers to “areas contiguous to *the area corresponding to said base station*,” clearly referring back to first “channel estimation” limitation. That language is again repeated at the end of the claim in the “interference amount” limitation. *See id.* at 10:32–33. All of this language occurs in the context of describing how a single base station transmits. Notably, the preamble shows how one would refer to multiple areas corresponding to a plurality of base stations—“areas corresponding to the plurality of said base stations.” *Id.* at 10:9–10. In short, the claim establishes that a plurality of base stations must have corresponding “areas” (plural), so there is an obvious singular/plural mismatch between “area” (singular) and “base stations” (plural) of the

disputed phrase.<sup>2</sup>

Second, “the correction is not subject to reasonable debate based on consideration of the claim language and the specification.” *Pavo Sols.*, 35 F.4th at 1374. None of the other possibilities advanced by Defendants are reasonable. For example, Defendants suggest “said base stations” could refer to the “plurality of base stations” in the preamble, Dkt. No. 127 at 12, but that phrase characterizes the communication system in which the claimed invention is intended to operate rather than the base station itself. The same holds true for Defendants’ suggestion the term refers to “base stations corresponding to areas contiguous to the area.” *Id.* That makes no sense, because the limitation in which the disputed phrase appears is describing the channel-estimation signals that are part of the basis on which data is being transmitted by the recited *base station*. Alternatively, Defendants suggest changing “outside” to “inside” is a reasonable option, but that is inconsistent with Figure 7 and the notion of a one-to-one relationship between base stations and areas.

Finally, Defendants don’t argue the prosecution history suggests a different interpretation of the claims from Daingean’s construction. Instead, they argue Daingean’s construction doesn’t make sense because it renders some of the phrase’s language superfluous. *See generally* Dkt. No. 127 at 14–17. That position, however, is somewhat undercut by the examiner’s position during prosecution. As filed, Claim 1 lacked any reference to areas “outside of the area corresponding to said base stations,” instead only requiring the base station to:

transmit[s] data to the mobile subscriber station . . . on the basis of the channel

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<sup>2</sup> Defendants argue that “[i]f ‘area’ is understood to be a ‘sector,’ then contiguous areas . . . can be within the same *cell*,” so a base station might include multiple areas. Dkt. No. 127 at 15. But the patent explains “[i]f sectors are considered to be areas, each sector unit corresponding to its sector is considered to be a base station corresponding to its area.” ’803 Patent at 3:36–38. The Court finds nothing in the intrinsic record that undercuts the notion of a one-to-one relationship between either (1) a cell and a base station or (2) a sector and a sector unit.

estimation signal received from the mobile subscriber station in an area corresponding to the base station and the channel estimation signals received from adjacent mobile subscriber stations in areas contiguous to the area corresponding to the base station.

'803 File History, Dkt. No. 121-5 at 28. The examiner, however, rejected Claim 1 because “the claim d[id] not clearly define areas contiguous to the area, the contiguous areas could be within the same cell as the area.” *Id.* at 288. In response, the applicant added “that are outside of the area corresponding to the base station” (singular) to the end of the claim, *id.* at 308, thus directly addressing the examiner’s perceived lack of clarity. Thus, at least the examiner did not consider the added language superfluous. But even if it is, “[t]he preference for giving meaning to all terms . . . is not an inflexible rule that supersedes all other principles of claim construction.” *SimpleAir, Inc. v. Sony Ericsson Mobile Commc’ns AB*, 820 F.3d 419, 429 (Fed. Cir. 2016).

As for the impact on claim scope, the Court sees none. The correction aligns the claim language with how a skilled artisan would understand its scope, which is also the scope set forth in the specification.

To summarize, a skilled artisan would understand there is a clear one-to-one relationship between a “base station” and its corresponding “area.” Given that, along with full context provided by the claim, there is an obvious error in the disputed phrase. Because four of Defendants’ five proposed interpretations are not reasonable in light of the intrinsic record, and because Daingean has shown judicial correction is appropriate, the Court judicially corrects this phrase to “the areas contiguous to the area corresponding to said base station that are outside the area corresponding to said base station.”

**C. “a base station for a communications system that has a plurality of said base stations”**

<b>Daingean’s Construction</b>	<b>Defendants’ Construction</b>
No construction necessary; plain and ordinary meaning. Not indefinite.	Indefinite. Preamble is limiting.

Defendants make two arguments concerning this phrase. First, they allege the preamble is limiting. Second, they assert Claim 12 is indefinite because the preamble uses “said base stations” when limiting the structure of the “communications system.”

*1. Whether Claim 12’s preamble is limiting.*

Defendants contend several terms from Claim 12’s preamble provide antecedent basis for terms in the body. Dkt. No. 127 at 19. Thus, the preamble is limiting because it does much more than merely recite an intended purpose. Daingean contends the preamble of Claim 12 is not limiting because it merely describes the intended use of the base station. Dkt. No. 121 at 6.

The preamble is limiting. Even though it recites an intended use of the invention, the body of the claim refers back to the preamble for antecedent basis. *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 952 (Fed. Cir. 2006) (“[W]hen the limitations in the body of the claim ‘rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.” (quoting *Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003))). Importantly, the preamble establishes the relationship between the later recited claim elements. For example, the preamble specifies how areas correspond to base stations and other elements of the invention.

*2. Whether the preamble’s use of “said base stations” renders Claim 12 indefinite*

Defendants call the preamble’s recitation of “a plurality of said base stations” a “fatal claim

drafting error” because it cannot be understood to be only one base station and must refer back to the same “base station” recited at the beginning of the preamble. Dkt. No. 127 at 20; *see also* Hr’g Tr., Dkt. No. 148 at 23:14–16 (“So we’ve got a singular base station that somehow has to include multiple instances of itself. That’s an impossibility.”). Daingean replies that “plurality of said base stations” refers to the communication system rather than the base station. Dkt. No. 130 at 9.

The Court agrees with Daingean. The question of indefiniteness must always be considered from the perspective of a skilled artisan. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1348 (Fed. Cir. 2015) (noting indefiniteness requires the trial court to determine “what a skilled artisan would glean from subsequently issued patents and their prosecution histories”). Here, a skilled artisan would understand from the context of the claim language that “plurality of said base stations” simply means a plurality of other base stations with the same limitations or characteristics. Defendants rely on what they call “clear precedent” that supports their position, Dkt. No. 127 at 20 (citing *Salazar v. AT&T Mobility LLC*, 64 F.4th 1311, 1316 (Fed. Cir. 2023), and *Apple Inc. v. MPH Techs. Oy*, 28 F.4th 254, 261 (Fed. Cir. 2022)), but the Federal Circuit has never endorsed divorcing consideration of the claim language from the perspective of a skilled artisan. Regardless, those cases considered different facts and circumstances.

Here, the structure of the claim chosen by the applicant is unconventional, but that alone does not render it indefinite. The Court holds the preamble is limiting and will give the phrase a “plain and ordinary meaning” construction.

**D. “area”**

Daingean’s Construction	Defendants’ Construction
No construction necessary; plain and ordinary meaning. Not indefinite.	Either a cell or the sector of a cell corresponding to a sector unit of a base station. Otherwise, indefinite.

Asserting “‘area’ is not a term of art in the context of cellular telecommunication systems,” Defendants stress the specification provides only two examples of what an “area” can be—either (1) a sector; or (2) a cell. Dkt. No. 127 at 21 (citing ’803 Patent at fig.1, fig. 7, 3:35–38). Defendants also note the specification’s reference to “a communication area—called as a cell [sic]—around itself to wirelessly communicate with the mobile subscriber sections.” *Id.* at 23 (quoting ’803 Patent at 2:67–3:2). “The patent,” say Defendants, “only talks about ‘areas’ in the context of ‘sectors’ or ‘cells,’ and provides no other possible understanding of what the claimed ‘area’ may be . . . .” *Id.* at 127.

Daingean disputes any lexicography and asserts a lay meaning of “area”—“a geographic region or extent of space on a surface”—should apply. Dkt. No. 121 at 16–17. Skilled artisans, it says, would understand “area” with reasonable certainty. It points to the patent’s explanation that each stationary base station “has a communication area [] around itself.” ’803 Patent at 2:66–3:3 (emphasis added). Similarly, the ’803 Patent teaches that mobile subscriber stations are “located respectively in areas corresponding to the plurality of base stations” and “can satisfactorily communicate with a base station corresponding to an area to which the subscriber station belongs.” *Id.* at 2:6–9, 2:25–28 (emphasis added).

The Court agrees with Defendants. As they stress, the specification explains each base station has a communication area around itself called a cell. ’803 Patent at 2:66–3:3 (“a

communication area—called as a cell [sic]—around itself to wirelessly communicate with the mobile subscriber sections.”). Elsewhere, the patent explains that “what is referred to as ‘area’ in the present invention may be a cell or a sector.” *Id.* at 3:35–36. And “[i]f sectors are considered to be areas, each sector unit corresponding to its sector is considered to be a base station corresponding to its area.” *Id.* at 3:36–38. Despite the patent’s use of the word “may,” this amounts to lexicography. The applicant did not intend to limit the scope of the invention to just a base-station “cell,” but also a base-station “sector,” and he defined “area” to cover both concepts.

Arguing against any lexicography, Daingean points to its expert’s opinion that an “area” “may include a geographic region or any extent of space on a surface.” Dkt. No. 121 at 17 (quoting Feuerstein Decl., Dkt. No. 121-4 ¶ 120). He gives two reasons for that: (1) “none of the claims are explicitly limited to a cell or sector unit,” and (2) “a POSITA would not understand the specification to define an ‘area’ as being limited to a cell or sector unit.” Feuerstein Decl., Dkt. No. 121-4 ¶¶ 120–21.

Neither reason is persuasive. As to the first, the scope of a claim term is not limited to how that term might be explicitly limited in the claim, but rather how a skilled artisan would understand the term in light of the specification. Regarding the second, he concludes “a POSITA understands that the permissive ‘may’ is not lexicographic,” *id.* ¶ 121, but deciding whether there is lexicography is not his expertise. Notably, Plaintiff’s expert provides no reasoning from a skilled artisan’s perspective as to why, considering the specification, such a person would understand “area” as anything other than a “cell” or a “sector.” Instead, he summarizes Defendants’ position, Feuerstein Decl., Dkt. No. 121-4 ¶ 118, restates the claim, *id.* ¶ 119, and then provides the reasoning discussed *supra*, *id.* ¶¶ 120–21.

Regardless, even if the excerpts referenced above do not amount to lexicography, a skilled



artisan would nonetheless understand an “area” is either a sector or a cell from the specification. Interpreting “area” as something more amorphous is inconsistent with the purpose of the invention, because the “communications area” of each base station within the system must have clearly defined boundaries that are contiguous to other areas. As such, Daingean’s proposed ordinary meaning—“a geographic region or extent of space on a surface”—is disconnected from the art of a cellular telecommunications system and therefore not the proper construction for the term. *See Vitronics Corp. v. Conceptronic*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (noting “the specification is always highly relevant to the claim construction analysis” and “the single best guide to the meaning of a disputed term”). Accordingly, the Court construes “area” as “a cell or a sector of a cell.”

**E. “each mobile subscriber station in each area transmitting a channel estimation signal to each said base station corresponding to the area and to base stations corresponding to areas contiguous to the area”**

Daingean’s Construction	Defendants’ Construction
No construction necessary; plain and ordinary meaning. Not indefinite.	Indefinite.

Defendants make two challenges to this term. First, harkening back to the dispute about “area,” they accuse Daingean of claiming there are two types of “areas”-- Dkt. No. 127 at 24. They say this phrase “must be construed to refer consistently to the ‘sector’ or a ‘cell’ corresponding to a given ‘mobile subscriber’ or ‘base station.’” *Id.* Second, they assert the claim is invalid for lack of antecedent basis. *Id.* That is, “the area” could refer to more than one area, and a skilled artisan would not be able to determine which is referenced. *Id.*

The Court disagrees on both points. First, the Court’s construction of “area” moots the first part of Defendants’ challenge. As for the second part of the challenge, the meaning of the phrase is clear. Each mobile station of the system in which the base station is to be used transmits to the

base station corresponding to the area in which the mobile station resides as well as the base stations of contiguous areas. Because there is no uncertainty here, the Court holds this term is not indefinite for lack of antecedent basis and will give this term a “plain and ordinary meaning” construction.

**F. “the corresponding area” / “the area contiguous to the area corresponding to said base station” / “the area contiguous to the corresponding area”**

<b>Daingean’s Construction</b>	<b>Defendants’ Construction</b>
No construction necessary; plain and ordinary meaning. Not indefinite.	Indefinite.

Pointing to the annotated version of Claim 12 set forth below, Defendants contend a skilled artisan would not understand to what these various “area” phrases refer. Dkt. No. 127 at 25. Specifically, Defendants question to which of the various potential “areas” in the preamble (underlined in red) the phrases highlighted in green, yellow, and orange refer. *Id.* at 25–26.

12. A base station for a communication system that includes a plurality of said base stations and mobile subscriber stations located respectively in areas corresponding to the plurality of said base stations, each mobile subscriber station in each area transmitting a channel estimation signal to each said base station corresponding to the area and to base stations corresponding to areas contiguous to the area, wherein:

said base station transmits data to the mobile subscriber stations using a transmission beam that is directed to the mobile subscriber stations in the corresponding area and is not directed to adjacent mobile subscriber stations in the areas contiguous to the corresponding area, the data being transmitted by the base station to the mobile subscriber stations on the basis of

the channel estimation signal received from the mobile subscriber station in an area corresponding to said base station,

the channel estimation signals received from the adjacent mobile subscriber stations in the areas contiguous to the area corresponding to said base station that are outside of the area corresponding to said base stations, and

an interference amount at the adjacent mobile subscriber stations in the areas contiguous to the area corresponding to the base station.

Dkt. No. 127 at 25. Daingean, however, says Claim 12 refers to just two types of areas: (1) those corresponding to a particular base station, and (2) contiguous areas that correspond to other base stations. Dkt. No. 121 at 21.

Claim 12 is not indefinite on this basis. The claim language establishes each base station has a corresponding area, which may be contiguous with areas of other base stations in the system. In Claim 12, the green-highlighted language clearly refers to the claimed base station. The yellow language refers to corresponding areas of *other* base stations in the communication system, as does the orange language. Not only is this clear from reading the claim, Figure 7 confirms this interpretation. The Court will therefore give this term a “plain and ordinary meaning” construction.

**G. “A base station . . . said base station transmits data”**

Daingean’s Construction	Defendants’ Construction
No construction necessary; plain and ordinary meaning. Not indefinite.	The preamble is limiting. Indefinite.

Defendants assert Claim 12 is an invalid mixed-class claim. They argue that, in contrast to cases like *Mastermine Software, Inc. v. Microsoft Corp.*, 874 F.3d 1307 (Fed. Cir. 2017), and *UltimatePointer, LLC v. Nintendo Co.*, 816 F.3d 816 (Fed. Cir. 2016), the claim language “recites actual action that must be taken in order for there to be infringement.” Dkt. No. 127 at 27. They analogize to *Rembrandt Data Techs. v. AOL*, 641 F.3d 1331 (Fed. Cir. 2011).

Daingean responds to Defendants’ challenge by focusing on Claim 12’s “wherein” clause, which it says starts the portion of the claim reciting the base station’s capabilities. Dkt. No. 121 at 27. Citing *UltimatePointer*, it notes the appellate court’s explanation that “the claims do not recite functionality divorced from the cited structure. Therefore, the claims do not reflect an attempt to claim both an apparatus and a method, but instead claim an apparatus with particular capabilities.” *Id.* at 28 (quoting *UltimatePointer*, 816 F.3d at 819).

Focusing first on Defendants’ reliance on *Rembrandt*, the patent at issue concerned a modem using “trellis encoding,” which is a technique for reducing errors in data transmission. *Rembrandt*, 641 F.3d at 1333. The claim at issue was directed to “[a] data transmitting device” with five limitations. The first four limitations recited “first buffer means for partitioning,” “fractional encoding means for receiving,” “second buffer means for combining,” and “trellis encoding means for trellis encoding.” *Rembrandt*, 641 F.3d at 1339. The fifth limitation was “transmitting the trellis encoded frames,” but none of the other limitations suggested any structure or function related to a transmitter. *See id.*

*Rembrandt* asked the court to insert “transmitter section for” at the beginning of the last limitation, which the court declined to do. *Id.* Specifically, the Court said Rembrandt had “not demonstrated that a skilled artisan would have read its proposed language into the claim.” *Id.* Notably, another claim from the *Rembrandt* patents specifically recited a “transmitter section for transmitting,” suggesting some difference in scope arising from the different language. *Id.* at 1340.

Here, Claim 12 is distinguishable from *Rembrandt* in part because of the difference in their preambles. Unlike the “data transmitting device” in the preamble of *Rembrandt* patent, Claim 12 is directed to a “base station.” The preamble is limiting, and there is no dispute that a “base station” has the inherent structural limitations necessary to transmit and receive signals. Moreover, the “wherein” clause as a whole is not so much about transmitting data as on what the transmitted data is based—the “channel estimation signals” and “interference amounts” recited at the end of the claim.

In short, a skilled artisan would understand the language after the “wherein” clause in Claim 12 to be directed to a capability of the base station—in particular, on what the transmitted data is based—rather than a requirement that the base station perform some action. Accordingly, the Court holds this language is not an indefinite mixed-class claim and construes “said base station transmits data . . .” as “said base station configured to transmit data . . . .”

## V. CONCLUSION

Disputed Term (Claim 12)	The Court's Construction
“the base station,” “said base station,” and “said base stations”	Plain and ordinary meaning
“the areas contiguous to the area corresponding to said base station that are outside the area corresponding to said base stations”	“the areas contiguous to the area corresponding to said base station that are outside the area corresponding to said base station”
“a base station for a communications system that has a plurality of said base stations”	Plain and ordinary meaning. The preamble is limiting.
“area”	“a cell or a sector of a cell”
“each mobile subscriber station in each area transmitting a channel estimation signal to each said base station corresponding to the area and to base stations corresponding to areas contiguous to the area”	Plain and ordinary meaning.
“the corresponding area” / “the area contiguous to the area corresponding to said base station” / “the area contiguous to the corresponding area”	Plain and ordinary meaning.
“A base station . . . said base station transmits data”	“A base station . . . said base station configured to transmit data”

The Court **ORDERS** each party not to refer, directly or indirectly, to its own or any other party's claim-construction positions in the presence of the jury. Likewise, the Court **ORDERS** the parties to refrain from mentioning any part of this opinion, other than the actual positions adopted by the Court, in the presence of the jury. Neither party may take a position before the jury that contradicts the Court's reasoning in this opinion. Any reference to claim construction proceedings is limited to informing the jury of the positions adopted by the Court.

**SIGNED this 13th day of November, 2024.**

  
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ROY S. PAYNE  
UNITED STATES MAGISTRATE JUDGE